

Name: \_\_\_\_\_

### at1110paper\_practice\_test (v35)

1. Solve the equation with factoring by grouping.

$$15x^2 - 12x - 10x + 8 = 0$$

$$(3x - 2)(5x - 4) = 0$$

$$x = \frac{2}{3} \quad x = \frac{4}{5}$$

2. Expand the following expression into standard form.

$$(2x + 7)(2x - 7)$$

$$4x^2 - 14x + 14x - 49$$

$$4x^2 - 49$$

3. Factor the expression.

$$x^2 + 2x - 24$$

$$(x - 4)(x + 6)$$

4. Expand the following expression into standard form.

$$(7x + 3)^2$$

$$49x^2 + 21x + 21x + 9$$

$$49x^2 + 42x + 9$$

5. Solve the equation.

$$11x^2 + 14x - 33 = 4x^2 - 5x + 3$$

$$7x^2 + 19x - 36 = 0$$

$$(7x - 9)(x + 4) = 0$$

$$x = \frac{9}{7} \quad x = -4$$

6. Factor the expression.

$$49x^2 - 36$$

$$(7x - 6)(7x + 6)$$

7. Solve the equation.

$$(6x + 5)(3x - 2) = 0$$

$$x = \frac{-5}{6} \quad x = \frac{2}{3}$$

8. Expand the following expression into standard form.

$$(3x - 2)(9x - 8)$$

$$27x^2 - 24x - 18x + 16$$

$$27x^2 - 42x + 16$$